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## RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/459,062

DATE: 06/19/2001

TIME: 12:40:34

Input Set : A:\17634341.app

Output Set: N:\CRF3\06192001\I459062.raw

ENTERED

3 <110> APPLICANT: Tao, Tao  
4 Skiadopoulos, Mario H.  
5 Collins, Peter L.  
6 Murphy, Brian R.  
8 <120> TITLE OF INVENTION: CONSTRUCTION AND USE OF RECOMBINANT PARAINFLUENZA  
9 VIRUSES EXPRESSING A CHIMERIC GLYCOPROTEIN  
11 <130> FILE REFERENCE: 17634-000340US  
13 <140> CURRENT APPLICATION NUMBER: 09/459,062  
C--> 14 <141> CURRENT FILING DATE: 2001-06-04  
16 <150> PRIOR APPLICATION NUMBER: 09/083,793  
17 <151> PRIOR FILING DATE: 1998-05-22  
19 <150> PRIOR APPLICATION NUMBER: 60/059,385  
20 <151> PRIOR FILING DATE: 1997-09-19  
22 <150> PRIOR APPLICATION NUMBER: 60/047,575  
23 <151> PRIOR FILING DATE: 1997-05-23  
25 <160> NUMBER OF SEQ ID NOS: 57  
27 <170> SOFTWARE: PatentIn Ver. 2.1  
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31 <212> TYPE: DNA  
32 <213> ORGANISM: Artificial Sequence  
34 <220> FEATURE:  
35 <223> OTHER INFORMATION: Description of Artificial Sequence: Flanking  
36 sequence of measles HA gene insert for N-P and P-M  
37 junctions.  
39 <400> SEQUENCE: 1  
40 cttaagaata tacaaataag aaaaacttag gattaaagag cg 42  
43 <210> SEQ ID NO: 2  
44 <211> LENGTH: 36  
45 <212> TYPE: DNA  
46 <213> ORGANISM: Artificial Sequence  
48 <220> FEATURE:  
49 <223> OTHER INFORMATION: Description of Artificial Sequence: Flanking  
50 sequence of measles HA gene insert for N-P and P-M  
51 junctions.  
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54 gatccaacaa agaaacgaca ccgaacaaac cttaag 36  
57 <210> SEQ ID NO: 3  
58 <211> LENGTH: 101  
59 <212> TYPE: DNA  
60 <213> ORGANISM: Artificial Sequence  
62 <220> FEATURE:  
63 <223> OTHER INFORMATION: Description of Artificial Sequence: Flanking  
64 sequence of measles HA gene insert for HN-L  
65 junction.  
67 <400> SEQUENCE: 3  
68 aggcctaaaa gggaaatata aaaaacttag gagtaaagtt acgcaatcca actctactca 60

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77 <220> FEATURE:
78 <223> OTHER INFORMATION: Description of Artificial Sequence: Flanking
79     sequence of measles HA gene insert for HN-L
80     junction.
82 <400> SEQUENCE: 4
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84 gcaatcagac aataggcct 79
87 <210> SEQ ID NO: 5
88 <211> LENGTH: 83
89 <212> TYPE: DNA
90 <213> ORGANISM: Artificial Sequence
92 <220> FEATURE:
93 <223> OTHER INFORMATION: Description of Artificial Sequence: Forward primer
94     for PCR of measles HA gene insert for N-P and P-M
95     junction.
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98 ttaatcttaa gaatatacaa ataagaaaaa cttaggatta aagagcgatg tcaccacaac 60
99 gagaccggat aaatgccttc tac 83
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103 <211> LENGTH: 67
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108 <223> OTHER INFORMATION: Description of Artificial Sequence: Reverse primer
109     for PCR of measles HA gene insert for N-P and P-M
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117 <210> SEQ ID NO: 7
118 <211> LENGTH: 55
119 <212> TYPE: DNA
120 <213> ORGANISM: Artificial Sequence
122 <220> FEATURE:
123 <223> OTHER INFORMATION: Description of Artificial Sequence: Forward primer
124     for PCR of measles HA gene insert for HN-L
125     junction.
127 <400> SEQUENCE: 7
128 gacaataggc ctaaaaggga aatataaaaa acttaggagt aaagttacgc aatcc 55
131 <210> SEQ ID NO: 8
132 <211> LENGTH: 68
133 <212> TYPE: DNA
134 <213> ORGANISM: Artificial Sequence
136 <220> FEATURE:

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137 <223> OTHER INFORMATION: Description of Artificial Sequence:
138     Reverse/Forward primer for PCR of measles HA gene
139     insert for HN-L junction.
141 <400> SEQUENCE: 8
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143 gtccttcc 68
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149 <213> ORGANISM: Artificial Sequence
151 <220> FEATURE:
152 <223> OTHER INFORMATION: Description of Artificial Sequence: Forward primer
153     for PCR of measles HA gene insert for HN-L
154     junction.
156 <400> SEQUENCE: 9
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161 <210> SEQ ID NO: 10
162 <211> LENGTH: 28
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167 <223> OTHER INFORMATION: Description of Artificial Sequence: Reverse primer
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169     junction.
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176 <211> LENGTH: 28
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180 <220> FEATURE:
181 <223> OTHER INFORMATION: Description of Artificial Sequence:
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183     insert for HN-L junction.
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186 cggataaacg cggtctacaa agataacc 28
189 <210> SEQ ID NO: 12
190 <211> LENGTH: 25
191 <212> TYPE: DNA
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194 <220> FEATURE:
195 <223> OTHER INFORMATION: Description of Artificial Sequence: Reverse primer
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197     junctions.
199 <400> SEQUENCE: 12
200 ccatcttccc gggtgactgt gcagc 25
203 <210> SEQ ID NO: 13
204 <211> LENGTH: 23

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205 <212> TYPE: DNA
206 <213> ORGANISM: Artificial Sequence
208 <220> FEATURE:
209 <223> OTHER INFORMATION: Description of Artificial Sequence: Upstream HPIV2
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213 gggccatgga agattacagc aat                                23
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219 <213> ORGANISM: Artificial Sequence
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225 <400> SEQUENCE: 14
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229 <210> SEQ ID NO: 15
230 <211> LENGTH: 31
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232 <213> ORGANISM: Artificial Sequence
234 <220> FEATURE:
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243 <211> LENGTH: 30
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247 <220> FEATURE:
248 <223> OTHER INFORMATION: Description of Artificial Sequence: Downstream
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261 <223> OTHER INFORMATION: Description of Artificial Sequence: HPIV1 HN
262     primer.
264 <400> SEQUENCE: 17
265 agtggctaata tgcattgcat ccacat                            26
268 <210> SEQ ID NO: 18
269 <211> LENGTH: 24
270 <212> TYPE: DNA
271 <213> ORGANISM: Artificial Sequence
273 <220> FEATURE:
274 <223> OTHER INFORMATION: Description of Artificial Sequence: HPIV1 HN

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277 <400> SEQUENCE: 18
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281 <210> SEQ ID NO: 19
282 <211> LENGTH: 15492
283 <212> TYPE: DNA
284 <213> ORGANISM: Artificial Sequence
286 <220> FEATURE:
287 <223> OTHER INFORMATION: Description of Artificial Sequence: Sequence of
288      pFLC.PIV32, 15492 bp in sense orientation.
290 <400> SEQUENCE: 19
291 accaaacaag agaagaaact tgtctgggaa tataaattta acttttaaatt aacttaggat 60
292 taaagacatt gactagaagg tcaagaaaag ggaactctat aatttcaaaa atgttgagcc 120
293 tatttgatac atttaaatgca cgtaggcaag aaaacataac aaaatcagcc ggtggagcta 180
294 tcattcctgg acagaaaaat actgtctcta tattcgccct tggaccgaca ataactgatg 240
295 ataatagaaa aatgacatta gctcttctat ttctatctca ttactagatg aatgagaaac 300
296 aacatgcaca aagggcaggg ttcttggtgt ctttattgtc aatggcttat gccaatccag 360
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305 atgacctcac aaccatagaa aagaatatac aaattggttg caactacata agagatgcag 900
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321 aaactatcaa atcatggatt cttgggaaga ggaatcaaga gataaatcaa ctaatatctc 1860
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323 aaacgacaca atcaacacaa gaaccagca actcagtgcc accatctgtc aaccagaaat 1980
324 caaaccaaca gaaacaagt agaaagatag tggatcaact gacaaaaata gacagtccg 2040
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326 gagaggacct gggagaagaa gcagctcaga tagtagagct gagactgtgg tctctggagg 2160
327 aatccccaga agcatcacag attctaaaaa tggaacccaa aacacggagg atattgatct 2220
328 caatgaaatt agaaagatgg ataaggactc tattgagggg aaaatgcgac aatctgcaaa 2280

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